PMAC | PRINCE MAHIDOL AWARD CONFERENCE 2023

SETTING A NEW HEALTH AGENDA

At the Nexus of Climate Change, Environment, and Biodiversity

24 - 29 JANUARY 2023 | BANGKOK, THAILAND

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| SETTING A NEW HEALTH AGENDA – AT THE NEXUS OF CLIMATE CHANGE, ENVIRONMENT AND BIODIVERSITY

The triple planetary crisis, three interconnected crises – 'Climate Change, Biodiversity Loss, and Pollution' are putting global health and well-being at risk. They undermine opportunities to reduce poverty, ensure intra- and inter-generational equity and improve lives, and they complicate the response to the COVID-19 crisis.

Addressing and acting on the nexus of climate change, biodiversity loss, and environmental degradation would reduce the risk of current and new health threats, creating a more promising and healthy future for coming generations and not leaving the most vulnerable groups behind.1 There are salient opportunities for maximizing health co-benefits by addressing inter-linkages and common grounds of social and planetary dimensions for future human- and planet sustainability, creating multi-level conversations and actions to accelerate progress towards the 2030 Agenda.

The Prince Mahidol Award Conference is a powerful global multi-stakeholder platform that can enable complex dialogues, stimulating inter-sectorial and interdisciplinary collaboration among countries, sectors and disciplines, sending positive signals for scaling up efforts to tackle these converging crises, and to improve human and planetary health. PMAC 2023 offers a unique opportunity to address the Triple Planetary Crisis (climate change, biodiversity loss and pollution) and Triple Billion global health burden of people lacking access to health care, needing enhanced protection from health emergencies, and falling behind health and wellbeing metrics.

The format of PMAC allows deeper dives into several fields within the nexus of climate, biodiversity, pollution and health, with a strong emphasis on policy and private sector accountability and initiatives at all levels; global, national, regional, and community levels. Active engagement with politicians and other decision-makers, academia, and the business sector at this level, PMAC 2023 aims to stimulate action-oriented discussions and pave a strong foundation for collaborative action and decision-making regarding climate, environment and biodiversity for optimal health outcomes.

Sub-Theme 1

Addressing the Nexus of Climate Change, Environment, Biodiversity, and Health Emergencies

SUB-THEME 1

The triple planetary crisis, three interconnected crises – climate change, environmental degradation, and biodiversity loss– are putting global health and well-being at risk. They undermine opportunities to reduce poverty, ensure intra- and inter-generational equity and improve lives, and they complicate the recovery from the COVID-19 crisis and the prevention of another infectious disease pandemic. Vulnerable populations and areas with already weak health infrastructure are at most risk, often without the capacity to prepare and respond to the impact of these interconnected crisis.

Acknowledgement of the health–environment nexus, our scientific understanding of the crises and the common urgency to act upon them are growing. But the relationship between health, climate change, environmental degradation and biodiversity loss is complex, and there is an urgent need to understand these complexities to create policies of mitigation and adaption to their direct and indirect relations. Over 4 million people die prematurely each year from outdoor air pollution. Two-third of which can be attributed to the burning of fossil fuels, a direct driver of climate change. The energy sector is responsible for almost three-quarters of the emissions that have already pushed global average temperatures 1.1 °C higher since the pre-industrial age , highlighting the energy sector's place at the core of sustainable change, finding new solutions while balancing the rise in demand with a growing global population.

At high levels, leaders have signalled an interest in shifting global activities toward more integrated and inter-disciplinary work at the climate, biodiversity and health nexus. However, to address the triple crisis with their interactions with and implications for health we need systemic change, swift actions and innovative solutions from all sectors and all levels of society.

Framework

A holistic approach to planetary and human wellbeing is provided by Kate Raworth's "Doughnut Economics" model. Raworth's model builds on Rockström's planetary boundaries by combining social and planetary boundaries, taking a systematic approach for future sustainability for human and planetary health, questioning the need for traditional economic growth to re-focus on more sustainable policies for all. According to the doughnut economic model the environmentally safe and socially just space in which humanity can thrive lays between social and planetary boundaries. In addition, the world is home to the largest generation of youth in history whose future is increasingly uncertain. We must ensure that they are given the opportunity to actively participate in decision-making processes and to hold decision makers accountable.

Key Questions

The World We Want: What does an environmentally safe and socially just space for humanity look like? How can the health sector strengthen the social foundation and at the same time reinforce the ecological ceiling to create/nurture an environmentally safe and socially just space for humanity?

[1] International Energy Agency (2021) World Energy Outlook 2021. https://www.iea.org/reports/world-energy-outlook-2021

[2] Raworth, K. (2017). A Doughnut for the Anthropocene: humanity's compass in the 21st century. The lancet planetary health, 1(2), e48-e49.

[3] Rockström et.al. (2009) Planetary boundaries: Exploring the safe operating space for humanity. Ecology and society, Vol.14, Issue

[4] Steffen et.al. (2015) Planetary boundaries: Guiding human development on a changing planet. Science, Vol 347,Issue 6223

Sub-Theme 2

Challenges and Opportunities: Overcoming Challenges and Harnessing Opportunities for Health at the Biodiversity Climate Nexus

SUB-THEME 2

Unabated biodiversity loss, climate change and pollution are the leading global health challenges of our time. Our dysfunctional global food system is at the heart of this “triple planetary crisis” and holistic multisectoral approaches to health, such as One Health and planetary health, are at the heart of solutions to bridge the persistent and growing health challenges they pose. At the same time, ecosystem-based approaches, or nature-based solutions, that embed health co-benefits offer essential opportunities to meet the adaptation and mitigation commitments set out in the Paris Agreement and post-2020 Global Biodiversity Framework, when combined with food system transformation, technological innovation, a green energy transition and the necessary socio-political and economic conditions to achieve equity and social justice.

Objectives

This sub-theme aims to take in-depth look at the common drivers of biodiversity loss, climate change and pollution, and the impact of these environmental determinants, coupled with social, political and economic determinants on health outcomes. It will focus both on underlying systemic challenges at this nexus and key opportunities to overcome them in the path toward sustainable transformational change. It will further seek to catalyze health leadership, from local to global levels, by drawing on existing evidence and knowledge through more coordinated, ambitious and inclusive multi-sectoral approaches to inform evidence-based policies and actions. It will also seek to identify key opportunities to maximize health co-benefits and minimize trade-offs at the biodiversity-climate nexus, and to build both social and ecological resilience, and resilient health systems and societies, in the face of global environmental change.

Sub-Theme 3

Making a Difference - Taking Action on the Ground

SUB-THEME 3

Political Opportunities for Action in 2022: Taking Stock of Global Commitments

The year 2022 presents a great opportunity to mainstream social justice and health in the global environmental agenda, with far-reaching consequences for the long-term health and resilience of communities and societies worldwide.

In recovering from the global shock caused by COVID-19 - and the resulting damage to livelihoods, health, and sustainable development – governments are increasingly prioritizing a healthy and sustainable recovery of their economies that takes into account the broader social, commercial and environmental determinants of health. To encourage a healthy post-COVID recovery, in May 2020, WHO launched its Manifesto, laying out 6 prescriptions and over 70 actions for achieving more sustainable, just and healthy societies.

Efforts by civil society groups, local communities, and policy makers at various levels have led to the increased recognition of the interconnections between our planet and our health. This is increasingly reflected in international fora, each of which present essential entry points for more coordinated, transformative change. This section will discuss essential entry points to raise ambition at the global level, examples include: World Health Day 2022 “Our planet, our health” campaign, the UN convention on biodiversity (CBD) process to develop a post-2020 Global Biodiversity Framework, the Health argument for climate action in the lead up to COP 27, the G7 and G20 commitment to the protection, management and restoration of biodiversity, and an improved understanding of the interrelations between nature, climate and health crises. (G7 2030 Nature Compact, G7 One Health Initiative), The Sao Paulo Declaration on Planetary Health (2021).

Taking Action for Our Planet and Our Health: Creating Opportunities from the Ground Up (National and Local Examples)

Investing in basic services can protect the health of the most vulnerable from the risks associated with climate change and nature loss. Investing in well-designed health services, infrastructure, sanitation, clean drinking water, drainage, electricity, and land-rights, can transform development opportunities, reduce inequalities, increase adaptive capacity, and reduce vulnerability to climate-related risks.

We have the solutions at hand. Priority actions to address the current climate, biodiversity and health crises include: protecting and restoring nature as the foundation of our health; building health resilience to climate risks; creating energy systems that protect and improve climate and health; transforming urban environments, transport, and mobility; promoting healthy, sustainable, and resilient food systems; and finance a healthier, fairer, and greener future to save lives.

Socio-political, Economic and Financial Dimensions

The public health benefits of actions and investments to reverse the climate and biodiversity crises far outweigh the costs. The health co-benefits from climate change actions are well evidenced, offer strong arguments for transformative change, and can be gained across many sectors. Effective solutions to reverse nature loss - such as protecting existing forests and other ecosystems, sustainable agriculture and balanced and healthy diets - offer some of the highest potentials for mitigation and adaptation while also bringing many health benefits (see WHO COP26 Special Report on Climate Change and Health: The Health Argument for Climate Action).

The sub-theme will be structured around three cross-cutting issues:

(1) Addressing intersecting crises and political opportunities at the global level;
(2) National and local opportunities to maximize health outcomes
(3) Socio-political and economic dimensions: Financing a healthier, greener future.

Objectives

This sub-theme 3, “Making a Difference: Taking Action on the Ground” will serve as an opportunity to critically reflect on the opportunities for action that are needed to create well-being societies. And it will exhibit initiatives, case-studies, alternative worldviews and socio-economic models for protecting and promoting health on a rapidly changing planet. These examples will represent a broad range of actors, sectors, geographies and perspectives and will highlight the multiple co-benefits of working across sectors for health, social justice, biodiversity and climate change.

| VENUE AND DATES OF THE CONFERENCE

Centara Grand at Central World Hotel, Bangkok

Tuesday 24 - Wednesday 25 January 2023	Side Meetings
Thursday 26 January 2023	Field Trip
Friday 27 - Sunday 29 January 2023	Main Conference

| STRUCTURE OF THE CONFERENCE

This is a closed, invitation only conference host by the Prince Mahidol Award Foundation, and the Royal Thai Government, together with other international co-hosts. The conference consists of:

1. **Pre-conference**
    - Side meetings
    - Field trip
2. **Main conference**
    - Keynote speeches
    - Plenary sessions
    - Parallel sessions
    - Synthesis: Summary and recommendations
    - Poster display

| PRE-CONFERENCE PROGRAM

Tuesday 24 January 2023

09:00-17:30	Side Meetings

Wednesday 25 January 2023

09:00-17:30	Side Meetings

Thursday 26 January 2023

09:30–18:00	Field Trip

| MAIN CONFERENCE PROGRAM

Friday 27 January 2023

09:00-10:30	Opening Session by HRH Princess Maha Chakri Sirindhorn and Keynote Addresses
10:00-10:15	Break
10:15-11:30	Plenary 0: Setting a New Health Agenda – at the Nexus of Climate Change, Environment, and Biodiversity
11:30-13:00	Plenary 1: Living within Limits – A Remedy for Climate Change, Biodiversity Loss, Pollution and Health?
13:00-14:00	Lunch / Special Event / Poster Presentation
14:00-16:00	◦ PS 1.1: Climate Injustice: Ethics, Distributions, Fairness, and Justice ◦ PS 1.2: Climate change communication ◦ PS 1.3: Transformation of Fossil Fuels and Health (Energy and Health)
16:00-17:00	Break / Special Event / Poster Presentation
17:00-18:00	Plenary 2: Overcoming Challenges and Harnessing Opportunities for Health at the Biodiversity-Climate Nexus
18:00-20:30	Welcome Dinner

Saturday 28 January 2023

08:30-10:30	◦ PS 1.4: Elevating the voices of young people for climate action ◦ PS 1.5: Climate Inaction: Power, Politics, and Political Economy ◦ PS 1.6: Metric and measurement
10:30-11:00	Break / Special Event / Poster Presentation
11:00-13:00	◦ PS 2.1: Food System Transformation: Challenges (Part 1) ◦ PS 2.2: Inter-sectoral, Multi-sectoral Approaches: Challenges (Part 1) ◦ PS 2.3: Integrating Health into Nature-based Solutions
13:00-14:00	Lunch / Special Event
14:00-16:00	◦ PS 2.4: Food System Transformation: Opportunities (Part 2) ◦ PS 2.5: Inter-sectoral, Multi-sectoral Approaches: Opportunities (Part 2) ◦ PS 2.6: Mobilizing Financial Resources for Climate and Health
16:00-17:00	Break
17:00-18:00	Plenary 3: Making a Difference: Taking Action on the Ground

Sunday 29 January 2023

08:30-10:30	◦ PS 3.1: Political and Social Movements ◦ PS 3.2: Transforming the Economy for Health Equity and Environmental Sustainability ◦ PS 3.3: Multi-sectorial Policies and Practices: Mitigation
10:30-11:00	Break
11:00-13:00	◦ PS 3.4: Social movements: their role in advocating to reduce the negative health effects of climate change ◦ PS 3.5: How do we reduce the impact of healthcare on the environment? ◦ PS 3.6:Multi-sectoral Policies and Practices: Adaptation
13:00-14:00	Lunch
14.00-15.00	Synthesis: Summary, conclusion and recommendations
15:00-16.00	Closing Session

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OPENING SESSION BY HRH PRINCESS MAHA CHAKRI SIRINDHORN AND KEYNOTE ADDRESSES

Time [BKK time]	Program
09.00 – 09.10 hrs.	Opening Remarks – HRH Princess Maha Chakri Sirindhorn
09.10 – 09.25 hrs.	Videos (Prince Mahidol Award Foundation and Prince Mahidol Award Conference)
09.25 – 09.40 hrs.	Keynote Session – Prince Mahidol Award Laureates (Pre-Recorded Video)
09.40 – 10.00 hrs	Keynote Speeches - Vandana Shiva, Founder, Research Foundation for Science, Technology and Ecology, India - Banthoon Lamsam, Chairman Emeritus of Kasikornbank, Thailand

| KEYNOTE SPEAKER

- **Banthoon Lamsam,** Chairman Emeritus, KASIKORNBANK, Thailand
- **Vandana Shiva,** Founder, Research Foundation for Science, Technology and Ecology, India

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PL 0

SETTING A NEW HEALTH AGENDA – AT THE NEXUS OF CLIMATE CHANGE, ENVIRONMENT, AND BIODIVERSITY

| MODERATOR

- **Richard Horton,** Editor In Chief & Publisher, The Lancet, United Kingdom

| KEYNOTE SPEAKER

- **Andri Snaer Magnason,** Writer and Documentary Film Director, On Time and Water, Dreamland, Casket of Time, LoveStar, The Story of the Blue Planet, Bonus Poetry, Iceland

| PANELIST

- **Vivian Camacho,** General Director, Health Ministry, Bolivia
- **Omnia El Omrani,** Plastic and Reconstructive Surgery Resident, Ain Shams University Hospital, Egypt
- **Banthoon Lamsam,** Chairman Emeritus, KASIKORNBANK, Thailand
- **Keizo Takemi,** Member, House of Councillors, Japan, Japan

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PL 1

LIVING WITHIN LIMITS – A REMEDY FOR CLIMATE CHANGE, BIODIVERSITY LOSS, POLLUTION AND HEALTH?

| BACKGROUND

The triple planetary crisis, three interconnected crises – climate change, biodiversity loss, and pollution – are putting global well-being at risk. Climate crisis has been identified as the biggest health threat of the 21st century, with the potential to reverse years of improvements in global health. It is also undermining opportunities to reduce poverty and improve the quality of lives globally.

The most recent Intergovernmental Panel on Climate Change (IPCC)[1] report warns of a "code red for humanity" and estimates that our planet will hit the critical increase of 1.5°C within the next 20 years, with irrevocable impacts. In September 2021, ahead of the COP26 climate conference in Glasgow, 233 health journals simultaneously called on governments to take urgent action to tackle the "catastrophic harm to health" from climate change.[2] But negotiations at the COP26 failed to reach global agreements on reducing emissions by half and raising the climate finance needed to keep below the 1.5°C threshold.

The UN predicts that currently we are on route to reach a 2.5°C warming by 2100,[3] but a recent article by McKay et al[4] paints a yet more alarming picture. Their updated analysis suggests that even if we stay within the Paris Agreement's range of limiting global warming to 1.5°C we are not safe. The article argues that current global warming of 1.1°C already lies within the lower end of five climate tipping points and further warming, which may be within the Paris Agreement's range, could trigger multiple climate tipping points. Going beyond these planetary boundaries could 'tip' the Earth system over the stable environmental state with severe consequences that could be catastrophic to human welfare.[5]

The adverse impact of changing environmental conditions is already felt through the scale and/or the reproduction of many water-, air-, food-, and vector-borne pathogens. Climate crisis has also caused more frequent and extreme whether events across every corner of the planet, and pollution has negatively impacted water and security, contributing to human morbidity and mortality and to the disruption of health service delivery1. Crudely put, addressing, and acting at the nexus of climate change, biodiversity loss, and pollution would reduce the risk of current and new health threats, create a more promising and healthy future for coming generations and assure that the most vulnerable groups are not left behind.

The next decade is therefore crucial; we must cut global greenhouse gas emissions by half to avoid catastrophic impacts to human societies and the natural systems upon which we depend. The main driving force of greenhouse gas emissions, along with other forms of air pollution, is the burning of fossil fuels (coal, oil, and natural gas) mainly for electricity and transportation.[6] The energy sector in itself is responsible for almost three-quarters of the emissions that pushed global average temperatures 1.1 °C higher since the pre-industrial age.[7] Yet, at the same time 750 million people — 10% of the global population — still lack access to reliable electricity. Over 2 billion people still primarily depend on biomass fuels for their energy needs, and consequentially suffer adverse health effects from indoor air pollution.[8]

It is evident that addressing the triple interconnected crises and its implication for health requires swift actions and a systemic change, as well as innovative solutions from all levels of society. Adaptation and mitigation, need to work this simultaneously. Please go to Haines and Frumkin for further reading.[9]

While acknowledgement of the health–environment nexus is growing, and political leaders have signaled an interest in shifting global activities toward integrated and inter-disciplinary approaches, action has been slow to follow[10]. The potentially long timeframes and the complexity, both the problems and the solutions, can prevent political actors to engage with intersectoral action, especially when intersectoral action also means challenging commercial interests.[11] But we cannot wait, we must act now to avoid catastrophic impacts. Our challenge is to ensure that everyone has an opportunity to thrive while respecting the limits of the Earth's resources.

Assuming that climate change, biodiversity loss and pollution and their impact on health are discussed during the opening session, during Plenary 1 we propose the introduction of Kate Raworth's Doughnut of social and planetary boundaries. The model is proposed as a framework to guide the conference as a whole and the session's discussions, and to call for actions for future sustainability for human and planetary health with a focus on **more regenerative and distributive policies**.

The Doughnut model[12] is built on Johan Rockström's nine planetary boundaries[13] and "consists of two concentric rings: a social foundation, to ensure that no one is left falling short on life's essentials, and an ecological ceiling, to ensure that humanity does not collectively overshoot the planetary boundaries that protect Earth's life-supporting systems. Between these two sets of boundaries lies a doughnut-shaped space that is both ecologically safe and socially just: a space in which humanity can thrive."[14]

At PMAC 2023, the essence of the Doughnut lies in a strong **foundation of human health and well-being** that no one should fall below, and an **ecological ceiling** of planetary pressure that we should not go beyond.

Moving into the Doughnut's safe and just space is 'the challenge of our century', and the session will reflect on this by considering the approaches proposed by the Doughnut Economics. The starting point of the Doughnut Economics is to move from considering a continuous GDP growth as the measure of progress and focus instead on collective wellbeing and thriving within our planet's limits.

This approach does not propose specific policies and/or actions, rather it promotes a way of thinking and encourages to consider approaches that can disrupt and turn the current divisive economies into more distributive ones. Simultaneously the model "recognizes that economies, societies, and the rest of the living world, are complex, interdependent systems that are best understood through the lens of systems thinking."[15]

Health initiatives are also carried out against a backdrop of a political landscape, where decisions are often made outside of the global health system, but they impact and often undermine efforts of global health initiatives. Countering this requires improved global governance, but also the acknowledgement and the identification of the specific policy environments and the power dynamics in which we operate.[16],8

The relationship between health, climate change, environment and biodiversity are complex, and there is an urgent need to understand these complexities to create ways and policies of mitigation and adaption to their direct and indirect relations. There are salient opportunities for maximizing health co-benefits by addressing interlinkages and common grounds of social and planetary dimensions for future human- and planet sustainability, creating multi-level conversations and actions to accelerate progress towards the 2030 Agenda.

[1] IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate. Cambridge University Press. In Press

[2] https://www.bmj.com/content/374/bmj.n2177

[3] https://www.wri.org/insights/cop26-key-outcomes-un-climate-talks-glasgow

[4] McKay et al., Exceeding 1.5°C global warming could trigger multiple climate tipping points. Science 377, 1171 (2022)

[5] Rockström J. et al., A safe operating space for humanity. Nature, Vol 461:24;2009.

[6] F Perera and K Nadeau; Climate Change, Fossil-Fuel Pollution, and Children's Health, N Engl J Med 2022;386:2303-14. DOI: 10.1056/NEJMra2117706

[7] International Energy Agency: World Energy Outlook 2021. Accessed at: World Energy Outlook 2021 (windows.net)

[8] P Wilkinson, K R Smith, M Joffe, and A Haines; Energy and Health 1: A global perspective on energy: health effects and injustices. Lancet 2007; 370: 965–78; DOI:10.1016/S0140-6736(07)61252-5

[9] Haines A and Frumkin H; Planetary Health: Safeguarding Human Health and the Environment in the Anthropocene. Cambridge University Press, 2021.

[10] Dasandi N, Cai W, Friberg P, et al. The inclusion of health in major global reports on climate change and biodiversity. BMJ Global Health 2022;7:e008731. doi:10.1136/ bmjgh-2022-008731

[11] Buse K. et al., Tackling the politics of intersectoral action for the health of people and planet. BMJ 2022;376: e068124 |

doi: 10.1136/bmj-2021-068124.

[12] Raworth K, A Doughnut for the Anthropocene: humanity's compass in the 21st century. The Lancet Planetary Health. 1 (2): e48–e49.

[13] Rockström J. et al., A safe operating space for humanity. Nature, Vol 461:24;2009.

[14] https://doughnuteconomics.org/about-doughnut-economics

[15] https://doughnuteconomics.org/about-doughnut-economics

[16] https://www.thelancet.com/commissions/global-governance-for-health

| OBJECTIVES

1. To spur awareness and increase political motivation to planetary stewardship by addressing the Triple Planetary Crisis (climate change, biodiversity loss and pollution) through the lens of human health.

2. To stimulate intersectoral and interdisciplinary collaboration and build coalition among health, environment, and climate change actors. The need for coherent global governance.

3. To improve knowledge on the nexus and embrace an active role in the knowledge-to-action (KTA) sphere. Identify common strategies and synergies for tackling the triple crisis and their impact on health.

Proposed Discussion Questions/Topics:

What are the tipping points? How can humanity move into the Doughnut’s safe and just space (building a strong social foundation, including human health and wellbeing while respecting ecological ceiling of planetary pressure)? What are the opportunities to stimulate paradigm shifts needed for improved human and planetary health? What are innovative solutions/measures to bridge climate/environment and health professionals in order to tip the scale in climate/environmental policy? What are successful examples of multi-stakeholder or public private sector partnerships to tackle and scale up climate resilient health systems?

| MODERATOR

- **Sharon Friel,** ARC Laureate Fellow, Professor of Health Equity and Director of the Menzies Centre for Health Governance at the School of Regulation and Global Governance (RegNet), Australian National University, Australia

| KEYNOTE SPEAKER

- **Johan Rockström,** Director, Potsdam Institute for Climate Impact Research, Sweden
- **Jemilah Mahmood,** Professor and Executive Director, Sunway Centre for Planetary Health in Malaysia, Malaysia
- **Anne Larigauderie,** Executive Secretary, Intergovernmental Science Policy Platform for Biodiversity And Ecosystem Services, Germany
- **David Daly,** Ambassador, The Embassy of the European Union, Ireland

| PANELIST

- **Abigail Johnson,** Medical Student, Climate Activist, Youth Advocate, UNICEF and AstraZeneca Young Leaders Program, Barbados
- **Alexandre Antonelli,** Director of Science, Royal Botanic Gardens Kew, Sweden

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PS 1.1

CLIMATE INJUSTICE: ETHICS, DISTRIBUTIONS, FAIRNESS, AND JUSTICE

| BACKGROUND

Global climate change is causing losses in foods, jobs, lives, and other areas throughout the global ecosystem. The impacts of these problems, including their most immediate consequences are felt most severely by communities that are already marginalized in one or more dimensions, whether economically, politically, socially, geographically, or otherwise. For example, in West Africa climate change is displacing people and increasing conflict, advancing food insecurity, and causing economic losses of nearly $4 billion annually due to erosion, according to 2019 World Bank estimates. Although climate change is a global phenomenon, as these figures suggest the impact is not universally felt. Rich countries and elite populations are more able to insulate themselves against the effects of climate change. The unfairness of this reality is compounded by the disproportionate responsibility born by the wealthy for producing carbon and other chemicals that cause climate change. Against this background, it is imperative to examine the ethical, distributional, and justice aspects of climate change.

| OBJECTIVES

The objectives of this session include clarifying examining major issues in the ethics and justice of climate change, considering the distributional aspects, and examining both accountabilities and responsibilities. The session will create a forum for advancing views from important constituencies, illuminating core issues of this area, and suggesting important solutions.

| MODERATOR

- **Sulakshana Nandi,** National Joint Convener, PHM India and Co-Chair, Global Steering Council, People's Health Movement, India

| PANELIST

- **Maureen Penjueli,** Coordinator, Pacific Network on Globalisation (PANG), Fiji

| SPEAKER

- **Anand Bhopal,** PhD Research Fellow, Bergen Centre for Ethics and Priority Setting in Health (BCEPS), the Department for Global Health and Primary Care, University of Bergen, Norway
- **Soukeyna Sylla,** Public Health Professional, The Global Fund, United States of America
- **Bhushan Tuladhar,** Chief of Party, USAID Clean Air, Family Health International (FHI 360), Nepal

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PS 1.2

CLIMATE CHANGE COMMUNICATION

| BACKGROUND

Background

Already in 1902, there was an article published in the Selma Morning Times in US attributing a theory to the Swedish Nobel laureate Svante Arrhenius that coal combustion could cause global warming that eventually may lead to human extinction. In recent decades the evidence base on climate change has become stronger and the awareness in terms of its health impacts has increased. Approaching the UN General Assembly in September 2021, BMJ and more than 200 medical journals published a joint editorial concluding that science is unequivocal, urging world leaders to act on climate change, “A global increase of 1.5°C above the pre-industrial average and the continued loss of biodiversity risk catastrophic harm to health that will be impossible to reverse”. The climate crisis affects everybody, and urgent mitigation action is needed i.e., to cut greenhouse gas emissions, the drivers of climate change, and adaptation, i.e., actions taken to manage unavoidable impacts and new conditions.

How climate change is communicated may have a decisive impact on the ability to create awareness, inform and motivate decision makers, civil society, and different stake holders for both far reaching climate mitigation and extensive resources for adaptation. The central role of communication in such processes has constantly been emphasized by researchers in recent years, but it has not been reflected in the space given in scientific debates.

Climate change communication closely relates to health communication. The importance of incorporating health communication insights into climate change communication has been emphasized. Health communication has developed over a far longer period than climate change communication, with focus on encouraging behavior modification and social change. There is vast experience in health communication of intervening, framing, and segmenting different audiences on relevant factors needed for tailored communication, to engage, empower, influence individuals and communities.

Climate communication emerged as a research area in the beginning of the 1990’s. For a long time, it mostly focused on awareness raising regarding climate change. During the last decade it has included aspects such as motivation, capacities, enabling, empowerment, civic engagement and public participation, organizational strategies, and persuasive strategies to affect attitudes, beliefs, and behaviors. Social marketing, widely used in public health interventions for decades, has also been more frequently used in climate change public engagement. There has also been growing attention to how climate change messages are framed to foster greater engagement. It has been suggested that communicating health effects could be a way to motivate people to change to low energy lifestyles. This potentially could occur in several ways; from avoiding negative direct health effects from climate change to embracing health benefits from mitigation and adaptation activities. Climate change communication has a lot to learn from health communication and by strengthening the knowledge base the power of communication can lead to greater impact regarding climate change action on both individual and societal level.

Previous research on agenda setting has shown that the amount of media coverage a topic receives correlates strongly with the public’s opinion of how important the topic is. Though, in the social media era there is also a social media agenda to consider in agenda setting processes when discussing factors that could mediate change. The rapid increase in the use of social media in recent decades has led to an increase in mis- and disinformation. From the 1950s, the tobacco industry organized campaigns as part of a cohesive strategy, the so called “tobacco strategies” to raise doubts that smoking could be harmful to health and herby delay regulations and legislation. It has frequently been reported how the fossil fuel industry uses the tobacco strategies for the same purpose. The main lesson from tobacco history is that delay in agreeing on

international policy and poor implementation will cost countless lives. Today, climate change is one of the topics that has been most subjected to organized disinformation. Social media networks are also fertile ground for misinformation. It circulates online, is disseminated to the public and discussed in established media, and in the worst case it can influence decision-makers.

| OBJECTIVES

Objectives

• Describe what climate communication is and explore how climate communication can produce engagement and action in decision makers, the general public and other stakeholders.

• Discuss how the risks of climate change can be communicated to provide change and action instead of creating passivity making people lose hope.

• Share knowledge how climate change can be communicated to different audiences (i.e., different countries, different levels of education, generations, etc.).

• Explore the role of health in climate communication.

• Show examples of how messages can be formulated and framed to create engagement.

• Discuss climate change misinformation and disinformation, specifically on social media and how risks can be counteracted.

| MODERATOR

- **Maria Nilsson,** Professor, Dept. of Epidemiology and Global Health. Editor in Chief - Global Health Action, Umeå University, Sweden, Sweden

| SPEAKER

- **Niheer Dasandi,** Associate Professor, University of Birmingham, School of Government, United Kingdom
- **Kathie Treen,** PhD-student, Computer Science, University of Exeter, United Kingdom
- **Tan Su Lin,** Journalist and co-founder, Science Media Centre Malaysia, Malaysia
- **Jagadish Thaker,** Senior Lecturer, University of Auckland, New Zealand

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PS 1.3

TRANSFORMATION OF FOSSIL FUELS AND HEALTH (ENERGY AND HEALTH)

| BACKGROUND

The most recent Intergovernmental Panel on Climate Change (IPCC) report warns of a "code red for humanity" and estimates that on current trends our planet will hit the critical temperature increase of 1.5°C within the next 20 years, with irrevocable impacts. The next decade is crucial; we must cut global greenhouse gas emissions by half to avoid catastrophic impacts to human societies and the natural systems upon which we depend.

The primary source of greenhouse gas emissions that drive climate change, along with other forms of air pollution, is the burning of fossil fuels (coal, oil, and natural gas) mainly for electricity and transportation. The energy sector in itself is responsible for almost three-quarters of the emissions that pushed global average temperatures 1.1 °C higher since the pre-industrial age, with measurable impacts on weather and climate extremes.

The changing environmental conditions have also negatively impacted human health through contributing to the scale and/or the reproduction of many water-, air-, food-, and vector-borne pathogens. Climate change has also caused more frequent and extreme whether events, and pollution has negatively impacted water and security, contributing to human morbidity and mortality and to the disruption of health service delivery. Additionally, the areas of the world projected to be hit the hardest by the climate crisis are also home to many of the world's poorest and most vulnerable communities, and to indigenous peoples with few options and resources to respond and adapt.

Furthermore, a recent study based on data from over 700 sites in 43 countries also shows that about one third of heat-related deaths in recent decades can be attributed to climate change and that increased mortality is evident on every continent.

There are several different assessments of the number of fossil fuel related air pollution deaths. According to the Lancet Commission on Pollution and Health, over 4 million people die prematurely each year from outdoor air pollution, two-thirds of which can be attributed to the burning of fossil fuels. It is estimated that 92% of Asia Pacific's population – about 4 billion people – are exposed daily to levels of air pollution that pose a significant risk to their health. New research lead by Harvard university also suggests that death rates from fossil fuel pollution are significantly higher than previously thought. Coal combustion is responsible for over 50% of fossil fuel related deaths in the energy sector and it is clear that fossil fuel burning is causing millions of premature deaths annually, albeit exact estimates vary depending on the studies included and assumptions made.

The relationship between energy and health is complex. On one hand, it is indisputable that the harnessing of fossil fuels has greatly benefited humanity and has contributed to the rapid technological, cultural, and social changes in the past century. Access to clean, affordable, and reliable power is essential for human health, education, and economic prosperity. However, the way we currently use and produce energy also greatly contributes to a burden of disease through pollution of environments and is the main driver of climate change.

the negative impact of the energy sector on health, while Figure 2 demonstrates the death rates associated with the production of one unit of electricity.

In addition to health threats, geopolitical considerations remain critically important in fossil fuel dependent energy systems. The recent supply interruptions in the context of the ongoing conflict in Ukraine highlighted the precariousness of our energy systems. There is a long and tragic history of armed conflict related to fossil fuels, and it is likely that decarbonizing our energy systems will reduce some of these pressures.

It is evident that the energy system must be at the heart of the solution to climate change. Global **warming cannot be limited to well-below 2°C without rapid and substantial changes to the energy system, with deep reductions in** carbon dioxide **and other greenhouse gas emissions from fossil fuel consumption.**

Climate change mitigation based on phasing out fossil fuels will address the health effects of climate change with benefits in the middle to longer term**, and also address the** health effects of fossil fuel burning from air pollution with expected benefits in the near term **In the meantime, energy demands, and emissions continue to rise**. From

2015 to 2019, global energy use grew by 6.6%, CO_2 emissions from the global energy system grew by 4.6%, with total greenhouse gas emissions rising by 2.7%. Despite the warnings of experts and the potential devastating and irreversible impact of climate change, the extraction of oil and gas has accelerated over the last decade, and according to a recent Guardian article is set to

increase. **The article reports on a set of projects, so-called 'carbon bombs', that are planned to start drilling before the end of this crucial decade. These projects, of which over 60% are already operating, set to produce 646bn tonnes of carbon dioxide emissions, swallowing the world's entire carbon budget.**

Concurrently the world has another global energy problem as 750 million people — 10% of the global population — still lack access to reliable electricity. Over 2 billion people still primarily depend on biomass fuels for their energy needs, and consequentially suffer adverse health effects from indoor air pollution. We live in an unequal world and climate change is expected to further exacerbate inequality. The poorest, most vulnerable communities are projected to be hit hardest by the impacts of climate change and already experience other damaging health impacts from a fossil fuel-based energy system, such as air pollution, to a greater extent.

The world's energy systems are in desperate need of modernization. We need to transition to clean energy, to safe, low-carbon, sustainable and cheap large-scale energy alternatives to fossil fuels. We must reconcile energy needs, especially for the poorest communities, with reducing the environmental effects of energy production and use. But when doing so we also need to address the current economic model and the political economy of energy production that promotes fossil fuels as a profitable and safe investment.

According to Sharon Y Eubanks, who led the US lawsuit against big tobacco for its harmful lies, the oil industry is the new tobacco industry. The tipping point for fossil fuel companies is approaching as the weight of scientific evidence is becoming too great to ignore and manage.

"Confronting the climate crisis requires action. People need to pressure governments and private firms to transition to a post-carbon economy." Achieving net zero emission will require the transition to clean energy. The good news is that renewable sources of energy are available and solutions that benefit both the planet and human health lie within reach. There are opportunities for clean electrification; a renewed focus on realising the full potential of energy efficiency, and to clean energy innovation and an increasing urgency to tackle climate change.

Investments to renewable sources of energy such as wind and solar PV are at their highest in over two decades, and electric vehicle sales set new records. A new energy economy is coming into view and hopefully the benefits these will provide for health, prosperity, and well-being for all.

| OBJECTIVES

OBJECTIVES:

- To raise awareness of the energy sector’s impact on health and its centrality to addressing climate change.
- To raise awareness of and discuss the two energy problems: lack of access on one hand and the use of polluting fossil fuels on the other.
- To discuss options to low carbon, affordable and large-scale energy alternatives to fossil fuels.

Session Structure

We propose to have an armchair conversation style session. Professor Renzo Guinto will be moderating the session and all panelists will be on stage or on screen for the whole duration of the session.

We will start with Professor Haines' keynote address, which will be about 20 minutes in length and will be delivered through video conferencing.

Following the keynote address, Prof. Renzo will introduce the panelists and the proceedings. Each panel member will be given the opportunity to reflect on the keynote address by providing a 5 minute speech, drawing on their area of expertise and work, and sharing key messages that they wish to stress.

This will be followed by a moderated and interactive discussion among the panelists and the audience focusing on policy oriented questions. Professor Renzo will moderate the discussion and will ask and guide the panelists to reflect on solutions, and the specific role of the government and the private sector in solving the issues brought up during the beginning of the session.

We have 120 minutes at our disposal, which should allow adequate time. However, we would like to kindly request everyone to respect the allocated time limits to ensure that everyone has the opportunity to express their views and allow time for a discussion.

| MODERATOR

- **Renzo R. Guinto,** Director, Planetary and Global Health Program, St. Luke's Medical Center College of Medicine, Philippines

| KEYNOTE SPEAKER

- **Andrew Haines,** Professor of Environmental Change and Public Health, London School of Hygiene & Tropical Medicine, United Kingdom

| PANELIST

- **Natalia Linos,** Executive Director, FXB Center for Health and Human Rights at Harvard University, United States of America
- **Alejandro Ren Daly Rivero,** Co-founder Latin American Coalition for Clean Air, UNICEF, MPA Candidate, Columbia University, United States of America
- **Marina Romanello,** Executive Director, The Lancet Countdown on Health and Climate Change, United Kingdom
- **Josep M. Anto,** Professor Emeritus of Medicine at Pompeu Fabra University, Research Professor of the Barcelona Institute for Global Health (ISGlobal), Spain
- **Yanadet Sripanich,** Business Lead, CCS, PTT Exploration and Production PLC, Thailand

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PS 1.4

ELEVATING THE VOICES OF YOUNG PEOPLE FOR CLIMATE ACTION

| BACKGROUND

By 2025, Gen Z will exceed over 30% of the global workforce. Join us for Future Talk: leverage Gen Z to create a workforce advantage. It is the only youth-led AND action-focused event. You will leave with innovative solutions and new ideas.

You will hear directly from young leaders. How can we harness Gen Z's unique drive and approach to address issues at the nexus of climate change, biodiversity loss and health crises?

FHI 360's partner, Future Minds Network will offer practical guidance and tools to action social change. Work collaboratively with participants to inspire and implement ideas that mobilise intergenerational action. Bring these back to your workplace and have actionable takeaways, new insights and a completely fresh perspective.

| OBJECTIVES

To inspire, raise youth voices and increase youth participation to address climate and health crisis.

| MODERATOR

- **Nathaniel Diong,** CEO, Future Minds Network, Australia

| PANELIST

- **Wilawan Panyoung,** Co-founder and CEO Environman.Co.,Ltd, Environman, Thailand
- **Tipvipa Kittikasemsak,** Founder, what a WHY, Thailand

| SPEAKER

- **Omnia El Omrani,** Plastic and Reconstructive Surgery Resident, Ain Shams University Hospital, Egypt
- **Shreesha Nankhwa,** Social and Behavior Change Communication Officer, FHI360, Nepal
- **Mohamed Eissa,** Liaison Officer for Public Health Issues, International Federation of Medical Students Associations (IFMSA), Egypt
- **Lavetanalagi Seru,** Regional Policy Coordinator, the Pacific Islands Climate Action Network (PICAN)., Fiji

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PS 1.5

CLIMATE INACTION: POWER, POLITICS, AND POLITICAL ECONOMY

| BACKGROUND

Climate change and biodiversity loss are existential threats to humanity but in most countries the mitigation and adaptation measures implemented thus far have been exceedingly modest. In communities living in vulnerable circumstances in low- and middle-income countries climate change is already real. For instance, the Pacific Islands' very existence is threatened by rising sea-levels and in Bangladesh flooding is more extreme and threatening to lives and livelihoods. Extreme weather, rising water levels, and other effects have already changed lives and livelihoods for the worse. By contrast, in rich countries urgency is felt mainly by specialized groups of activists and researchers that thus far lack the political influence to drive large-scale change. The distribution of vulnerability is not well correlated with carbon emissions, either, which means that the largest contributing nations and populations are less motivated to act by the changes already apparent to others. Within countries similar dynamics mirror those of the international story. Using a lens of power, politics, and political economy this session explores reasons why countries are having difficulty acting against climate change even as is manifested in deadly or harmful ways in many settings.

| OBJECTIVES

The objectives of this session include clarifying some of the major political and political economy problems that currently frustrate action that could counter climate change and providing a forum for amplifying views on these topics. For example, the session will discuss lobbying activities of fossil fuel industries and explore the difficulties of making the plight of communities in vulnerable circumstances salient in national and global politics.

| CHAIRS

- **Jesse Bump,** Executive Director of the Takemi Program in International Health and Lecturer on Global Health Policy, Harvard T.H. Chan School of Public Health, United States of America

| SPEAKER

- **Minah Kang,** Professor, Ewha Womans University, Republic of Korea
- **Ian Dunlop,** Member, or Advisory Board Member, The Club of Rome, ARC Centre of Excellence for Climate Extremes, Breakthrough National Centre for Climate Restoration, Australia, Australia
- **Julieta Kavetuna,** Member of Parliament Committee on Gender Equality, Social Development and Family Affairs, Parliament of Namibia, Namibia
- **Benita Kayembe,** Department of Global Health and Population, Harvard T.H. Chan School of Public Health, Master of Science Student, Harvard School of Public Health, United States of America
- **Angele Mendy,** Visiting scientist, Harvard T.H. Chan School of Public Health, Switzerland

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PS 1.6

METRIC AND MEASUREMENT

| BACKGROUND

Evidence particularly in quantitative form is powerful in informing the scale of the health burden from mortality and morbidity DALYs as well as the estimated economic impacts of this on the health sector and wider society.

Providing quantitative evidence in economic figures enables translation of relative scales of challenge across sectors facilitating decision making on the allocations of resources across sectors by ministries of finance and within the health sectors by ministries of health.

Where it can be provided presenting evidence on the costs and benefits accruable from investments in climate adaptation, i.e. to show where in both the short and long term benefits outweigh the cost of investment, represent powerful advocacy and policy prioritization tools.

| OBJECTIVES

1. To review state of the arts on measuring and quantifying health and economic burdens from climate-related risks to human health, including consideration of linkages to bio-diversity loss and direct pollution, changes in vector ecology and infectious diseases epidemiology, hampering food production resulting in food and nutritional insecurity and impacts on human health.

2. To review options to further develop the evidence based and development of tools to estimate costs and net benefits from government investment in measures to support climate adaptation interventions to reduce climate-related health risks to populations.

3. Sharing LMIC experiences on climate adaptation interventions and how in practices on these tools and metrics can be applied.

| MODERATOR

- **Tamer Samah Rabie,** Lead Health Specialist, The World Bank, United States of America
- **Diarmid Campbell-Lendrum,** Head, Climate Change and Health, Department of Environment, Climate Change and Health (ECH), World Health Organization, France

| KEYNOTE SPEAKER

- **Marina Romanello,** Executive Director, The Lancet Countdown on Health and Climate Change, United Kingdom

| SPEAKER

- **Dasho Karma Ura,** President, The Centre of Bhutan and Gross National Happiness Studies, Bhutan
- **Stephen Dorey,** Senior Environment and Health Specialist, The World Bank, United States of America
- **Alejandro Ren Daly Rivero,** Co-founder Latin American Coalition for Clean Air, UNICEF, MPA Candidate, Columbia University, United States of America
- **Stein Emil Vollset,** Professor of Health Metrics, the Department of Health Metrics Sciences, The University of Washington, United States of America

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PL 2

OVERCOMING CHALLENGES AND HARNESSING OPPORTUNITIES FOR HEALTH AT THE BIODIVERSITY-CLIMATE NEXUS

| BACKGROUND

Unabated biodiversity loss, climate change and pollution are the leading global health challenges of our time. Our dysfunctional global food system is at the heart of this “triple planetary crisis” and holistic multisectoral approaches to health, such as One Health and planetary health, are at the heart of solutions to bridge the persistent and growing health challenges they pose. At the same time, ecosystem-based approaches, or nature-based solutions, that embed health co-benefits offer essential opportunities to meet the adaptation and mitigation commitments set out in the Paris Agreement and post-2020 Global Biodiversity Framework, when combined with food system transformation, technological innovation, a green energy transition and the necessary socio-political and economic conditions to achieve equity and social justice.

| OBJECTIVES

The overall aim of sub-theme 2 will be to take in-depth look at the common drivers of biodiversity loss, climate change and pollution, and the impact of these environmental determinants, coupled with social, political and economic determinants on health outcomes. It will focus both on underlying systemic challenges at this nexus and key opportunities to overcome them in the path toward sustainable transformational change. It will further seek to catalyze health leadership, from local to global levels, by drawing on existing evidence and knowledge through more coordinated, ambitious and inclusive multi-sectoral approaches to inform evidence-based policies and actions. It will also seek to identify key opportunities to maximize health co-benefits and minimize trade-offs at the biodiversity-climate nexus, and to build both social and ecological resilience, and resilient health systems and societies, in the face of global environmental change.

| MODERATOR

- **Dennis Carroll,** Chair, Leadership Board, Global Virome Project, Senior Advisor, Global Health Security, URC, United States of America

| KEYNOTE SPEAKER

- **Vandana Shiva,** Founder, Research Foundation for Science, Technology and Ecology, India
- **David Nabarro,** Adviser for Sustainability, 4SD - Skills, Systems & Synergies for Sustainable Development, United Kingdom

| PANELIST

- **Kobie Brand,** Deputy Secretary General of ICLEI, Regional Director of ICLEI Africa, and Global Director for the ICLEI Cities Biodiversity Centre, ICLEI - Local Governments for Sustainability, South Africa
- **Lavetanalagi Seru,** Regional Policy Coordinator, the Pacific Islands Climate Action Network (PICAN)., Fiji
- **Maria Neira,** Assistant Director-General, a.i, Division of UHC/Healthier Popuations and Director, Department of Environment, Climate Change and Health, World Health Organization, Switzerland

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PS 2.1

FOOD SYSTEM TRANSFORMATION: CHALLENGES (PART 1)

| BACKGROUND

We are at a cross-roads: our largely dysfunctional food productions systems are responsible for about one quarter of all anthropogenic greenhouse gas (GHG) emissions; land use change is now the primary driver of biodiversity loss and infectious disease emergence; land degradation has reduced the productivity of one quarter of the global land surface. Over the past 5 decades, there has been a 300% increase in volume of agricultural production dependent on animal pollination and up to 75% of global food crops are dependent on animal pollination. Yet, pollinator declines alone contribute to annual losses ranging between USD $235 and $577 billion (IPBES 2017). Plastic pollution has increased tenfold since 1980, and its impacts come right back to human populations through the food chain.

Moreover, the loss of diversity from agro-food systems is increasing the vulnerability and reducing the sustainability of many production systems and has had negative effects on human health. While there have been significant increases in food production through the introduction of higher yielding uniform varieties and breeds, loss of genetic diversity in production systems through monocropping of uniform crop varieties or animal breeds has led to instances of large production losses and, in some cases, has had significantly negative health consequences. Loss of diversity has also resulted in the reduced provision of regulating and supporting ecosystem services, requiring additional chemical inputs and creating negative feedback loops (WHO, 2020).

The large and growing body of scientific evidence at this nexus will be instrumental to informing the format and structure of this session.

| OBJECTIVES

The global food system is the leading driver of biodiversity loss, a significant driver of climate change and at the heart of many communicable and noncommunicable diseases. The core aims of these sessions will be to answer the following broad questions: What are the primary (environment/climate/health) challenges posed by our dysfunctional global food system? What are some of the key entry points to overcome them?

The "Food System Transformation" session will be divided into two parts. Part 1 (Parallel Session 2.1) will emphasize the need for urgent food system transformation at the biodiversity, climate and health nexus and Part 2 (Parallel Session 2.4) will highlight opportunities to overcome them.

| MODERATOR

- **Francesco Branca,** Director of the Department of Nutrition and Food Safety, World Health Organization, Switzerland

| PANELIST

- **Danny Hunter,** Principal Scientist, The Alliance of Bioversity International and CIAT, Australia
- **Jessica Fanzo,** Professor, Johns Hopkins University - School of Advanced International Studies and the Bloomberg School of Public Health, United States of America
- **Abigail Johnson,** Medical Student, Climate Activist, Youth Advocate, UNICEF and AstraZeneca Young Leaders Program, Barbados
- **Vanida Khumnirdpetch,** Director of Bureau of Foreign Agricultural Affairs, Office of Permanent Secretary, Ministry of Agriculture and Cooperatives, Thailand

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PS 2.2

INTER-SECTORAL, MULTI-SECTORAL APPROACHES: CHALLENGES (PART 1)

| BACKGROUND

Biodiversity, healthy ecosystems and human health and well-being are inextricably linked. Yet, we continue to see the destruction of our natural world to our own detriment.

Human ecological disruption, unsustainable consumption and production, climate change and pollution have driven both infectious and noncommunicale disease risk long before the COVID 19 pandemic. Today, the risk of both infectious disease outbreaks and noncommunicable diseases is increasing rapidly, as is the incidence of antimicrobial resistance. Increased disease risk is itself driven by increasing anthropogenic changes and the impacts of human activities on the environment. In particular, unsustainable exploitation of the environment due to land-use change, agricultural expansion and intensification, unregulated animal trade and consumption, pollution, the increased use of antimicrobials in food production systems and other drivers disrupt natural interactions and ecosystem integrity and combine to drive disease risk.

Climate change has also been implicated in disease emergence (e.g. tick-borne encephalitis in Scandinavia) and will likely cause substantial health risks in future by driving the movement of people, wildlife, reservoirs, and vectors, and spread of their pathogens, in ways that lead to new contact among species, increased contact among species, disrupt natural host-pathogen dynamics, by hindering food and nutrition security and food safety, and can also drive the risk of NCDs.

Some of the questions explored through this session will examine the main reasons that we have largely failed to value healthy ecosystems as a fundamental pathway to keeping humans healthy. It will also seek to address how key stakeholders and sectors can work together to achieve transformative change required to meet the Sustainable Development Goals and other global commitments (e.g. Paris Agreement, Post 2020 Global Biodiversity Framework).

What are the main reasons that we have largely failed to value healthy ecosystems and environments as a fundamental pathway to reducing the global burden of both infectious and non-communicable diseases?

- Lack of cross-sectoral engagement
- Inadequate political leadership/political will and public support
- Inadequate financing for multisectoral collaboration (role of taxation)
- Insufficient community empowerment (political voice, authority)
- Competing private sector interests

| OBJECTIVES

Finding synergies to maximize co-benefits can be meaningfully achieved only through concerted multi-sector, multi-stakeholder collaboration. Newly expanded initiatives and collaborations and tools to support the implementation of One Health and other integrated approaches to health, such as Ecohealth and planetary health, and other emerging or expanded partnerships, provide essential opportunities to address both global environmental challenges and infectious and noncommunicable disease risks.

The "Inter-sectoral, Multi-sectoral Approaches" session will be divided into two parts for an in depth look at the challenges (Parallel Session 2.2) associated with siloed actions to tackle the root causes of infectious and noncommunicable disease risk and opportunities (Parallel Session 2.5) and tools for cross-sectoral and multisectoral collaboration to overcome them. It will

enable participants both to engage in a constructive dialogue spanning the full breadth of the biodiversity and climate challenges that we face and to discuss opportunities for engagement to catalyze cross-sectoral action through integrated approaches such as One Health, and other integrated approaches to health.

| MODERATOR

- **Ronald Labonté,** Professor and Holder of the Distinguished Research Chair in Contemporary Globalization and Health Equity, University of Ottawa, Canada

| PANELIST

- **Puthita Kachintorn,** Pharma-agro Business Developer, K Agro-innovate Institute under Kasikornthai Foundation, Thailand
- **Doreen Robinson,** Head of Biodiversity and Land, UN Environment Programme, Kenya
- **John Amuasi,** Group Leader, Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR), Ghana
- **Nicole Redvers,** Associate Professor, University of Western, Canada
- **Amanda Quintana,** Climate and Health Technical Specialist and Researcher, Abt Associates and LSHTM, United Kingdom
- **Vipat Kuruchittham,** Executive Director, Southeast Asia One Health University Network (SEAOHUN), Thailand

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PS 2.3

INTEGRATING HEALTH INTO NATURE-BASED SOLUTIONS

| BACKGROUND

Many of of the solutions to common common public health and environmental threats can only be found through cross-sectoral and interdisciplinary knowledge exchange, action and policy. This session will showcase how coherent and inclusive, evidence-based policies at the public health, environment, and climate nexus – through the lens of Nature-based solutions – can help prevent future health risks associated with ecosystem degradation, biodiversity loss and climate change, and chart a common path toward the achievement of the Sustainable Development Goals.

Nature-based solutions are actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits (UNEP/EA.5/Res.5). Ecosystem health underpins human well-being, from climate resilience, to food and water security, to human health – and investing in NbS can offer catalytic opportunity for the health and environment sectors to work together to drive improved health outcomes.

| OBJECTIVES

This session will promote guidance and tools to support health integration into Nature-based Solutions by: (1) identifying co-benefits and trade-offs for human and ecosystem health, (2) strengthening social and ecological resilience and (3) supporting a healthy, green and just recovery from COVID-19. This collaboration focuses on embedding ecosystem health, biodiversity and climate change in One Health policies, plans and projects, and driving knowledge exchange on the environmental and social determinants of health, while systematically integrating health co-benefits in the development, design and implementation of Nature-based Solutions to climate change.

This session will:

- Present an overview of Nature-based Solutions, as aligned with the IUCN Global Standard on NbS 1, and detail how the health sector can drive leadership in the developemnt, design and implementation of these Nature-based Solutions;
- Examine the relationships between biodiversity, ecosystem degradation, climate and (infectious and noncommunicable) disease emergence, with a view to maximizing health co-benefits of sustainable ecosystem management and restoration.
- Assess the role of environmental, social and economic determinants of health and develop tools to strengthen cross-sectoral collaboration, policy coherence and the operationalization of an integrated Nature-based Solutions and One Health Approach;
- Mainstream health and biodiversity to support a transition toward sustainable and healthy food systems in ways that also support: dietary diversity; the sustainable management and use of biodiversity in agriculture, fisheries and forestry ecosystems; regenerative agriculture practices; crop diversity and sustainable harvesting practices; sustainable fisheries; sustainable management of livestock, wildlife, terrestrial, coastal and marine ecosystems; climate change adaptation and mitigation; and the interactions between these drivers, responses, and outcomes;
- Examine the contribution of biodiversity and green and blue infrastructure to support the creation of health-promoting environments and improve mental and physical health outcomes in both rural and urban areas, including the development and implementation of Nature-based climate Solutions focused on health co-benefits;
- Evaluate climate change as a cross-cutting driver and amplifier of ecosystem degradation, biodiversity loss and ill health, and developing policy guidance to maximize the health co-benefits of ecosystem-based adaptation and mitigation efforts.

This session will launch a new joint technical publication and key messages for policymaker on the integration of One Health

and Nature-based Solutions, laying out concrete ways that actions to protect biodiversity, nature and ecosystem health have far-reaching outcomes for human health. This session will be jointly organised by the World Health Organization, through its Department of Environment, Climate Change and Health, the International Union for the Conservation of Nature, and the Friends of Ecosystem-based Adaptation network, in consultation with the experts of the expert working group (EWG) on Biodiversity, Climate, One Health and Nature-based Solutions.

| MODERATOR

- **Cristina Romanelli,** Programme Officer, Biodiversity Climate Change and Health, World Health Organization, Switzerland

| PANELIST

- **Pipit Aneaknithi,** President, KASIKORNBANK, Thailand
- **Rayan Kassem,** West Asia Regional Director, Youth4Nature, Lebanon
- **Ali Rizvi,** Head of Climate Change , International Union for Conservation of Nature, United States of America
- **Elizabeth Pleuss,** Deputy Division Chief for Maternal and Newborn Health in the U.S. Agency for International Development's Global Health Bureau, and Leads the Global Health Bureau's Engagement on Climate Chang, USAID, United States of America
- **Jonathan Jennings,** Executive Director, Health in Harmony, United States of America
- **Loreta Rufo,** Senior Climate Change Specialist, Climate Investment Funds, The World Bank, United States of America

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PS 2.4

FOOD SYSTEM TRANSFORMATION: OPPORTUNITIES (PART 2)

| BACKGROUND

While its role is often poorly understood by the general public, there are essential opportunities for mainstreaming biodiversity to maximize food security, nutrition, and other health outcomes. Biodiversity in agricultural production systems makes essential contributions to food security and health and is the foundation for sustainable healthy diets. is the source of the components of production (crops, livestock, farmed fish), and the genetic diversity within these that ensures continuing improvements in food production, allows adaptation to current needs and ensures adaptability to future needs. Agricultural biodiversity is also essential for agricultural production systems, underpinning ecosystem services such as pollination, pest control, nutrient cycling, erosion control and water availability and supply.

These food system transformations not only have far-reaching impacts on our ecosystems and climate, they are also responsible for a significant and growing burden of malnutrition in all its forms. Transformation to healthy diets by 2050 will require substantial dietary shifts, including a greater than 50% reduction in global consumption of unhealthy foods such as sugar, and a greater than 100% increase in the consumption of healthy foods such as animal source foods, nuts, fruits, vegetables and legumes, with a special focus on countries with high levels of malnutrition. Dietary changes from current diets towards healthy more sustainable diets are likely to result in significant health benefits that, according to some estimates, include averting approximately 7.4 to 10.8 million premature deaths per year, a reduction of between 18% to 28% (Willet, 2019). The food system transformations that will be required needed differ greatly by regions and particular attention will need to be placed both to overcome key economic, socio political and environmental barriers, with particular attention on vulnerable populations, such as fishers and smallholder farmers, who are often most marginalized from decision-making processes.

As a whole, food systems have been identified as “the single strongest lever to optimize human health and environmental sustainability on Earth” (EAT Lancet, 2018). In this session we will explore how to harness biodiversity in local, national and regional initiatives to maximize co-benefits for biodiversity, climate and health and to strengthen social and ecological resilience and equity through food system transformation by adopting a comprehensive whole-of-society approach.

Case Study from India

There is enough evidence to show that red meats play a crucial role in nutrition and economy/livelihoods. In fact in India, these foods, particularly beef have been criminalised and used to lynch/target/discriminate an already extremely malnourished population and small businesses. The economic burden of stray cattle has also been well documented.

India, as you may know is a caste driven society and with the current government in power that actively targets the minority community. Malnutrition is at an all time high, especially with detrimental policies (meat bans, denial of eggs in mid-day meal schemes etc) and Covid related rigorous lockdowns that have destroyed livelihood especially of small business and daily wage workers. High levels of malnutrition are necessarily accompanied by several vitamin and mineral deficiencies for which the government is pushing for single nutrient, corporate dependent fortification, against which there has been several criticisms. So essentially, on the one hand, nutrient dense foods such as meats and eggs are being targeted while corporate dependent single nutrient solutions are being pushed on the country.

Millets are being pushed forward as the magic alternative but these are not nutrient dense and not comparable to animal source foods for either good quality, bioavailable proteins, minerals or vitamins. Again there is enough research even from the National Institute of Nutrition, India and other sources backing this.

Agencies like the Eat Lancet Commission, in collusion with national bodies like the Food Safety and Standards Authority of India (FSSAI) project India as a ‘vegetarian’ country and a model for other countries, never mind the malnutrition and its inter-generational consequences and also that India is not a predominantly vegetarian country. Only 20% Indians self identify as vegetarian and even they consume animal source foods such as dairy. This 20% are also more likely to belong to the oppressor caste/class groups that necessarily have access to more resources as well as ability to influence and push cheap cereal heavy diets on the poor.

| OBJECTIVES

The global food system is the leading driver of biodiversity loss, a significant driver of climate change and at the heart of many communicable and noncommunicable diseases. The core aims of these sessions will be to answer the following broad questions: What are the primary (environment/climate/health) challenges posed by our dysfunctional global food system? What are some of the key entry points to overcome them?

The "Food System Transformation" session will be divided into two parts. Part 1 (Parallel Session 2.1) will emphasize the need for urgent food system transformation at the biodiversity, climate and health nexus and Part 2 (Parallel Session 2.4) will highlight opportunities to overcome them.

| MODERATOR

- **David Nabarro,** Adviser for Sustainability, 4SD - Skills, Systems & Synergies for Sustainable Development, United Kingdom

| KEYNOTE SPEAKER

- **Vandana Shiva,** Founder, Research Foundation for Science, Technology and Ecology, India

| PANELIST

- **Sylvia Karpagam,** Public Health Doctor and Researcher, Independent, India
- **Maureen Miruka,** Director, Strategic Partnerships and Research, Food and Water Systems, CARE International, Kenya
- **Marcos Ezequiel Filardi,** Human Rights and Food Sovereignty Lawyer, University of Buenos Aires, Argentina
- **Sharon Friel,** ARC Laureate Fellow, Professor of Health Equity and Director of the Menzies Centre for Health Governance at the School of Regulation and Global Governance (RegNet), Australian National University, Australia

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PS 2.5

INTER-SECTORAL, MULTI-SECTORAL APPROACHES: OPPORTUNITIES (PART 2)

| BACKGROUND

The One Health High Level Expert Panel, endorsed by the World Health Organization, the Food and Agriculture Organization, The World Organization for Animal Health and United Nations Environment Programme have developed a new definition of One Health to promote a clear understanding, translate across sectors and areas of expertise and strengthen linkages of the environmental dimensions of One Health. This more comprehensive and inclusive understanding of One Health, provides for the first time, a common definition across all four institutions.

The definition describes One Health as “an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals, and ecosystems. It recognizes that health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent. The approach aims to mobilize multiple sectors, disciplines, and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development.” This more holistic understanding of One Health provides new opportunities for meaningfully embedding the full range of environmental and social determinants of health, to optimise health outcomes for people, plants, animals and ecosystems alike. It also makes it possible to reduce the tendency to fragment and compartmentalize One Health approaches, and to optimize outcomes for both infectious and noncommunicable disease risks (OHHLEP et al., JPA, 2022).

Drawing from some of the core challenges addressed in part 1 (Parallel Session 2.2), we may wish to move toward a focus on creating opportunities to support health, sustainability, and resilience through integrated approaches to health. One Health provides such opportunities.

- Collaboration/coordination across sectors
- Capacity-building
- Communication

| OBJECTIVES

Finding synergies to maximize co-benefits can be meaningfully achieved only through concerted multi-sector, multi-stakeholder collaboration. Newly expanded initiatives and collaborations and tools to support the implementation of One Health and other integrated approaches to health, such as Ecohealth and planetary health, and other emerging or expanded partnerships, provide essential opportunities to address both global environmental challenges and infectious and noncommunicable disease risks.

The "Inter-sectoral, Multi-sectoral Approaches" session will be divided into two parts for an in depth look at the challenges (Parallel Session 2.2) associated with siloed actions to tackle the root causes of infectious and noncommunicable disease risk and opportunities (Parallel Session 2.5) and tools for cross-sectoral and multisectoral collaboration to overcome them. It will enable participants both to engage in a constructive dialogue spanning the full breadth of the biodiversity and climate challenges that we face and to discuss opportunities for engagement to catalyze cross-sectoral action through integrated approaches such as One Health, and other integrated approaches to health.

| MODERATOR

- **Cristina Romanelli,** Programme Officer, Biodiversity Climate Change and Health, World Health Organization, Switzerland

| PANELIST

- **Chadia Wannous,** Global One Health Coordinator, World Organization for Animal Health (WOAH), France
- **Thi Huong Le,** Dean of the Institute of Preventive Medicine and Public Health (IPMPH) and Executive Board Member of the Southeast Asia One Health University Network (SEAOHUN), Hanoi Medical University, Viet Nam
- **Sean Hillier,** Associate Professor & York Research Chair in Indigenous Health Policy & One Health, Faculty of Health, York University, Canada
- **Boripat Siriaroonrat,** Researcher, Mahidol University, Thailand
- **Catherine Machalaba,** Principal Scientist, Health and Policy, EcoHealth Alliance, United States of America

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PS 2.6

MOBILIZING FINANCIAL RESOURCES FOR CLIMATE AND HEALTH

| BACKGROUND

This event will focus on a financing approach to mobilizing resources for climate and health

The impacts of climate change on health are significant and growing. At the same time the health sector is a non-trivial contributor to national greenhouse gas emissions. More resources clearly need to be secured to tackle these climate-related health risks and to decouple the climate impact of delivering healthcare. Resources are needed from both the adaptation and mitigation perspectives. There are already interventions and policies that can be integrated into health programming and scaled to realize the co-benefits when the right financing conditions are put in place. This event will focus on two topical examples, one with more of a mitigation focus energy and health – and its role in sustainable cooling and solarization, and one with an adaptation and resilience focus – Pandemic Prevention Preparedness and Response.

| OBJECTIVES

- Describe financing (including climate financing) opportunities to enable action at the intersection of climate and health
- Discuss examples of where implementation on the ground has been facilitated by availability of sufficiently **timely** and **substantial** financing

| MODERATOR

- **Tamer Samah Rabie,** Lead Health Specialist, The World Bank, United States of America

| KEYNOTE SPEAKER

- **Mai Farid,** Assistant Minister and Executive Director, Economic Justice Unit, Ministry of Finance, Egypt

| SPEAKER

- **Harish Hande,** CEO, SELCO Foundation, India
- **Maria Neira,** Assistant Director-General, a.i, Division of UHC/Healthier Popuations and Director, Department of Environment, Climate Change and Health, World Health Organization, Switzerland
- **Ashlinn Quinn,** Research Scientist, Berkeley Air Monitoring Group, United States of America
- **Toomas Palu,** Adviser in Global Health, The World Bank, Switzerland
- **Loreta Rufo,** Senior Climate Change Specialist, Climate Investment Funds, The World Bank, United States of America
- **Priya Basu,** Executive Head, Pandemic Fund Secretariat, The World Bank, United States of America

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PL 3

MAKING A DIFFERENCE: TAKING ACTION ON THE GROUND

| BACKGROUND

Political opportunities for action in 2022: taking stock of global commitments

The year 2022 presents a great opportunity to mainstream social justice and health in the global environmental agenda, with far-reaching consequences for the long-term health and resilience of communities and societies worldwide.

In recovering from the global shock caused by COVID-19 - and the resulting damage to livelihoods, health, and sustainable development – governments are increasingly prioritizing a healthy and sustainable recovery of their economies that takes into account the broader social, commercial and environmental determinants of health. To encourage a healthy post-COVID recovery, in May 2020, WHO launched its Manifesto, laying out 6 prescriptions and over 70 actions for achieving more sustainable, just and healthy societies.

Efforts by civil society groups, local communities, and policy makers at various levels have led to the increased recognition of the interconnections between our planet and our health. This is increasingly reflected in international fora, each of which present essential entry points for more coordinated, transformative change. This section will discuss essential entry points to raise ambition at the global level, examples include: World Health Day 2022 “Our planet, our health” campaign, the UN convention on biodiversity (CBD) process to develop a post-2020 Global Biodiversity Framework, the Health argument for climate action in the lead up to COP 27, the G7 and G20 commitment to the protection, management and restoration of biodiversity, and an improved understanding of the interrelations between nature, climate and health crises. (G7 2030 Nature Compact, G7 One Health Initiative), The Sao Paulo Declaration on Planetary Health (2021).

Taking action for our planet and our health: Creating opportunities from the ground up (national and local examples)

Investing in basic services can protect the health of the most vulnerable from the risks associated with climate change and nature loss. Investing in well-designed health services, infrastructure, sanitation, clean drinking water, drainage, electricity, and land-rights, can transform development opportunities, reduce inequalities, increase adaptive capacity, and reduce vulnerability to climate-related risks.

We have the solutions at hand. Priority actions to address the current climate, biodiversity and health crises include: protecting and restoring nature as the foundation of our health; building health resilience to climate risks; creating energy systems that protect and improve climate and health; transforming urban environments, transport, and mobility; promoting healthy, sustainable, and resilient food systems; and finance a healthier, fairer, and greener future to save lives.

1) Enhancing resilience at the national and local levels through national reporting mechanisms

Country strategies and plans, such as the National Biodiversity Strategies and Action Plans (NBSAPs) and Nationally Determined Contributions to the Paris Agreement, are progressively integrating actions at the nexus of climate change, environment, biodiversity and health, in order to safeguard and promote livelihoods, wellbeing and climate resilient development.

Currently, significant global environmental settlements do not include many health aspects. Greater inclusion of health in NDCs (nationally determined contributions) and climate change mitigation policies could simultaneously increase health benefits and achieve the "well below 2°C" commitment across a range of regional and economic contexts. The NDCs Synthesis report by the secretariat found that health was identified as an adaptation priority in many of the adaptation components, with relevant policy frameworks and plans described. The importance of building the capacity of health institutions and enhancing information and awareness was highlighted. Enhancing the climate resilience of public health systems was a recurring theme, with countries aiming to build or improve related infrastructure.

2) Strengthening multi-sectoral coordination from the ground up: Operationalizing the One Health approach

WHO and the World Health Assembly (WHA) have recognized the role of biodiversity in protecting and promoting human health (WHA A71/11), and has made considerable efforts to integrate environmental determinants in the operationalization of the One Health approach.

At the global level, WHO is also working with FAO, OIE and UNEP to mainstream a broader understanding of One Health, including through the work of the newly expanded quadripartite alliance for One Health, the recent establishment of the WHO-IUCN expert working group on One Health, and by developing and field testing indicators to mainstream biodiversity for nutrition and health (e.g. WHO biodiversity workshop, WHO manifesto for a green and healthy recovery from COVID-19).

3) The health sector leading by example

Coordinated action in the health sector itself is also needed, to reduce its environmental and carbon footprint (4.4% of global greenhouse gas emissions) and build climate-resilient health care. This section will examine health sector leadership toward a low-carbon economy, supported by case studies and examples.

Socio-political, economic and financial dimensions

The public health benefits of actions and investments to reverse the climate and biodiversity crises far outweigh the costs. The health co-benefits from climate change actions are well evidenced, offer strong arguments for transformative change, and can be gained across many sectors. Effective solutions to reverse nature loss - such as protecting existing forests and other ecosystems, sustainable agriculture and balanced and healthy diets - offer some of the highest potentials for mitigation and adaptation while also bringing many health benefits.

1) Financing a healthier, more sustainable future

While recent years have sharply increased carbon dioxide levels in the air and global warming, renewable energy sources continue to grow rapidly, paving the way for future expansion and the development of cleaner energy economies. The development of clean energy is accompanied in parallel by rebounds in coal and oil use (looping back to the extreme levels of carbon dioxide), highlighting the need of placing the energy sector at the core of sustainable change and collaborative action needed to battle climate change and its impacts on human and planetary health, finding new solutions while balancing the rise in demand with a growing global population.

Financial decisions made in the coming months and years can either lock in economic development patterns that will do permanent and escalating damage to the ecological systems that sustain all human health and livelihoods, or, if wisely taken, can promote a healthier, fairer, and greener world (WHO 2021). In recovering from COVID-19, financial reform will be unavoidable. By transitioning towards a wellbeing economy that is aligned, financial systems would be redirected to prioritise human needs rather than unsustainable economic growth.

Key action points to finance a healthier, fairer, and greener future to save lives may include:

- **Stop funding pollution.** End harmful subsidies for fossil fuels, both domestically and abroad.
- **Close the health financing gap.** Invest in health adaptation and resilience and help close the health financing gap.
- **Ensure public finance does no harm.** Prevent investments in unsustainable and polluting activities that threaten communities' health and wellbeing.
- **Provide debt relief to vulnerable nations**. Show global solidarity for those most impacted.

| OBJECTIVES

PMAC 2023 Plenary session on the Sub-Theme 3 “Making a difference: Taking action on the ground” will serve as an opportunity to critically reflect on the opportunities for action that are needed to create well-being societies. And it will exhibit initiatives, case-studies, alternative worldviews and socio-economic models for protecting and promoting health on a rapidly changing planet. These examples will represent a broad range of actors, sectors, geographies and perspectives and will highlight the multiple co-benefits of working across sectors for health, social justice, biodiversity and climate change.

| MODERATOR

- **Agnes Binagwaho,** Retired Vice Chancellor, University of Global Health Equity, Rwanda

| PANELIST

- **Omnia El Omrani,** Plastic and Reconstructive Surgery Resident, Ain Shams University Hospital, Egypt
- **ANDREA MEZA MURILLO,** Deputy Executive Secretary, UNCCD, Germany
- **Keizo Takemi,** Member, House of Councillors, Japan, Japan
- **Vanida Khumnirdpetch,** Director of Bureau of Foreign Agricultural Affairs, Office of Permanent Secretary, Ministry of Agriculture and Cooperatives, Thailand
- **Anjali Kaur,** Deputy Assistant Administrator of the Bureau for Asia, USAID, United States of America

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PS 3.1

POLITICAL AND SOCIAL MOVEMENTS

| BACKGROUND

Movement on climate change and health requires political leadership at local, national and global scale. Global polling shows both that here is solid support for climate action across countries, that health is high on the list of climate change concerns, and that health professionals are among the most trusted voices in society. To date, however, there has been insufficient progress through political governance on climate change and health at either global (notably UNFCCC, World Health Assembly), or national level in most countries.

This session will discuss where political progress has been made at international, national and local level. It will make the connection between formal political processes and social movements that are mobilizing health and other voices to push for positive change on climate change and health.

| OBJECTIVES

1. To identify entry points and positive experiences in using health as a positive argument for driving coherent political action on climate change, air pollution, biodiversity and health.

2. To develop a more effective connection of positive climate and health social movements into political and other formal governance processes.

3. Examine impactful strategies/ lessons that can be brought to climate change from other global political movements i.e women's movement, other health movements like HIV.

4. The political consequences of climate change on health

| PANELIST

- **Roman Vega,** Senior Professor in Faculty of Public Health and Health Administration, Pontifical Javierian University, Colombia
- **Vivian Camacho,** General Director, Health Ministry, Bolivia
- **David Boyd,** UN Special Rapporteur on human rights and the environment, United Nations, Canada
- **Rita Issa,** Medical Doctor, Public Health Academic, and Activist, NHS, University of East Anglia, Lancet Migration, United Kingdom
- **Mary Bassett,** Commissioner of Health, New York State, United States of America
- **Maureen Penjueli,** Coordinator, Pacific Network on Globalisation (PANG), Fiji
- **Diarmid Campbell-Lendrum,** Head, Climate Change and Health, Department of Environment, Climate Change and Health (ECH), World Health Organization, France

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PS 3.2

TRANSFORMING THE ECONOMY FOR HEALTH EQUITY AND ENVIRONMENTAL SUSTAINABILITY

| BACKGROUND

The direct and indirect relationship between economic activities, health outcomes (equitable or otherwise), and environmental sustainability (notably climate change, biodiversity loss, and pollution) are no longer in doubt. What remains contested is whether reforms to our conventional market (capitalist) economy can lead to a 'green growth' in which the world equitably achieves net zero-carbon by 2050; or if the excess consumption of natural goods inherent in profit-driven market economies poses a systemic threat to the environment and, by implication, human health.

Some of the long- and medium-term financing and economic challenges that we face include:

- Unsustainable material consumption levels globally by high-income countries and the world's richest 10%.
- The need for material consumption levels to rise in low-income countries and the world's poorest 50% (generally through increased equitably distributed models of economic growth) to allow for ethical life expectancies.
- The pandemic and the invasion of Ukraine are increasing extreme (and not so extreme) poverty, food insecurity/acute hunger, and health inequities. The need for substantial financing for mitigation efforts directed to low-and-middle-income countries (LMICs) is greater now than in the years following the 2008 financial crisis.
- The economic shock from the pandemic and prospects for many LMICs of not recovering to pre-pandemic economic levels before 2026 have increased indebtedness, with recent inflation constraining their ability to fund access to essential health services and invest in green recovery.
- There is also concern that we may be poised for new rounds of austerity (fiscal contraction), and that new conditional lending to LMICs for pandemic relief and debt restructuring purposes will further weaken their ability to deal with the economic, health, and environmental fallout of COVID and the war in Ukraine.

Policy challenges include:

- HICs have yet to pledge and/or fulfill the level of commitments required to minimize the severe economic and environmental health risks now facing many of the world's poorer populations. Instead, increasing emphasis is given to incentivizing private capital investment in climate change initiatives (green energy, mitigation efforts) and health systems strengthening. It is important to note that the social impact of green technology investing (if effective) addresses wealth inequities that arise by dent of who benefits financially from such investment.
- The pursuit of carbon-neutrality in areas such as national economies and international trade (e.g. through fiscal and taxation policies, carbon-border adjustment measures, and other trade or investment treaty revisions to account for a zero-carbon global economy by 2050) is important; but it must also be aligned carefully with social and health equity goals.
- Carbon taxation and removal of fossil fuel subsidies should be enhanced and defined as also delivering direct health benefits from reduced pollution while also increasing governments' fiscal space to invest in health and green recovery.
- There need to be more financial institutional commitments to reduce loans to fossil fuel industries or redirect loans to green energy. Efforts to close tax havens (though improving) are still inadequate, while the commitment of many countries to ensure a minimum level of corporate taxation has yet to be implemented and fails to account for equitable allocation of tax benefits.
- Radical progressive and redistributive tax reforms (at national and global/intergovernmental levels) are needed to prevent financing shortfalls that risk sovereign debt defaults by LICs forced to borrow on global financial markets. IMF increases in special drawing rights holds some potential to reduce sovereign debt defaults but need to be adjusted to avoid most of the SDR benefits going to HICs and upper-MICs and not to LICs and LDCs where new financing needs are greatest.
- The financialized economy that led to the 2008 global financial crisis was spared dissolution through quantitative easing, which was repeated in central bank policies in most HICs in response to the social and economic dislocations arising from COVID and its public health interventions. In the years following the 2008 crisis little substantive reform to the liberalized global financial economy was undertaken, the result being vast amounts of surplus capital incentivizing private speculative investments and creating asset bubbles. This led to a huge upwards distribution in income and wealth, with most going to a sliver of elites. Governments must adopt policies that 'tame global finance'.
- Supply chain disruptions, pandemic-induced savings, and a surge in post-lockdown demand are creating inflation and the real risk of stagflation. Corporate profits are increasing in many economic sectors, suggesting that profiteering may also be driving inflation and the need for windfall taxes.
- The corporate oligopoly in global food markets worsens the growing evidence of new famines and starvation, as food prices rise beyond the affordability of many of the world's majority poor. Mass population movements within and between countries have not ceased, nor have the xenophobic responses and militarized borders by nations experiencing ongoing and often increased levels of irregular migration.

The intersecting nature of these crises suggests the need for new forms of economic management tools to achieve the net-zero target and a decarbonized economy by 2050 and to do so in a way that preserves biodiversity and avoids further environmental pollution. Such tools (intergovernmental agreements, policies, regulations, practices) must also be driven by the goal of reallocating the pre- and redistribution of material resources (and income/capital) within and between countries, while simultaneously reducing unsustainable levels of consumption by wealthier populations and countries and creating necessary consumption (growth) space for poorer groups and nations to achieve ethical life expectancies.

| OBJECTIVES

- Identify key tenets of economic 'health for all' policies that simultaneously decrease material (income/wealth) inequalities and achieve a safe consumption space protecting both human and planetary health.
- Debate the green growth/postgrowth (fair growth) policies in terms of improving health equity and ecosystem system sustainability at local, national, and global scales.
- Describe new financing mechanisms (fiscal policies, national/global funding programs, lending conditionalities) relative to achieving health equity and climate change goals and targets.
- Identify alternative economic and fiscal policies to austerity to reduce the impacts of inflation/profiteering and recession on health and human development outcomes.
- Discuss best practices in progressive (redistributive and environmentally protective) tax policies and strategies to overcome barriers to their implementation at local, national, and global scales.

| MODERATOR

- **Hani Serag,** Assistant Professor, Department of Internal Medicine and director, Global Health Partnerships, University Texas Medical Branch, United States of America
- **Bridget Lloyd,** Advisory Council, People's Health Movement, South Africa

| PANELIST

- **Ravi Duggal,** Independent Researcher, Consultant, India
- **Sandrine Dixson-Declève,** President, Club of Rome, Belgium
- **Ritu Sadana,** Head, WHO Secretariat, Council on the Economics of Health for All, WHO, Switzerland
- **Toomas Palu,** Adviser in Global Health, The World Bank, Switzerland

| SPEAKER

- **Ronald Labonté,** Professor and Holder of the Distinguished Research Chair in Contemporary Globalization and Health Equity, University of Ottawa, Canada
- **Jayati Ghosh,** Professor, University of Massachusetts Amherst, United States of America

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PS 3.3

MULTI-SECTORIAL POLICIES AND PRACTICES: MITIGATION

| BACKGROUND

Climate change has complex impacts on people's health that fall into three broad categories: 1) direct impacts such as heat and extreme events; 2) indirect impacts via ecosystems which include impacts on global food supplies and changes in vector-borne disease transmission; and 3) indirect impacts via socio-economic systems exemplified by increased poverty and intensification of existing inequalities and migration. The magnitude of these impacts on health will increase in the future and their severity will depend on the effectiveness of climate mitigation and adaptation actions. All people are exposed to the hazardous effects of climate change, but some groups are particularly vulnerable such as people living in low- and middle-income countries, small island nations and other coastal regions, megacities, and mountainous and polar regions. Other vulnerable groups include children, older adults, and those with underlying health conditions. Many of these groups live in higher rates of extreme poverty with few sources of support to adapt to a degraded, and climate-modified environment, let alone deal with the health consequences of these changes.

Main contributors to global climate change are fossil fuel combustion and industrial processes but also agriculture, deforestation and other land-use changes, transportation, and building energy use. In addition, the health sector is responsible for 4.6% of greenhouse gas emissions, with 70% coming from the health sector supply chain. Addressing this emission source is a critical need to meet carbon neutrality. A variety of co-benefits exist by mitigating emissions from the healthcare sector. Switching to renewable, distributed energy at hospitals and health centers, for example, can reduce GHG emissions, reduce air pollution, and generate money savings. Such a transition increases energy reliability as well, which can help facilities expand health service offerings and refrigerate temperature-sensitive medications.

Evidence suggests that the value of the health benefits of climate change mitigation has the potential to offset most of the initial mitigation costs. Successful policies and practices to address climate change mitigation and health require systematic, well-planned collaboration and decision-making between relevant sectors.

| OBJECTIVES

The objective of this session is to share practical lessons and innovations for multi-sectoral policies and practices to improve understanding of and strengthen multi-sectoral action on climate change mitigation and health across regions, looking at the impacts of climate on health and the healthcare sector on climate. This session will explore the various potential leverage points, financing mechanisms, and collaborations needed to mitigate climate change, promote human health and well-being, and secure environmentally sustainable healthcare practices, looking toward solutions that enhance justice and equity for vulnerable and underrepresented groups.

| CHAIRS

- **Douglas Webb,** Manager, Health and Innovative Financing, HIV, Health and Development Group, UNDP, United States of America
- **Lisha Yang,** Coordinator, UNDP, United States of America

| MODERATOR

- **Erica Key,** Executive Director, Future Earth US Global Hub, United States of America

| SPEAKER

- **Wijarn Simachaya,** President, Thailand Environment Institute, Thailand
- **Keisuke Nansai,** Research Director, Material Flow Innovation Research Program, National Institute for Environmental Studies, Japan
- **Ramon San Pascual,** Executive Director for Asia, Healthcare Without Harm, Philippines
- **Girma Gemechu,** Director General, Environmental Protection Authority, Ethiopia
- **Modi Mwatsama,** Head of Capacity and Field Development, Wellcome Trust, United Kingdom

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PS 3.4

SOCIAL MOVEMENTS: THEIR ROLE IN ADVOCATING TO REDUCE THE NEGATIVE HEALTH EFFECTS OF CLIMATE CHANGE

| BACKGROUND

Social movement have played a vital role in the history of public health. They have campaigned for the abolishment of slavery, the introduction of votes for women, improved sanitation and water in cities, protection of natural environments, and for reproductive rights to name a few examples. Thus these movements have played a very significant role in improving health conditions over many years, in most countries and globally.

There are numerous social movements around the globe that campaign on the issues of climate and health. Some movements are more focused on protecting the environment for its intrinsic value and other more concerned with actions directly related to health. Protecting the environment and biodiversity as part of combatting climate change is crucial to health because of the increasing evidence that contact with nature and spending time in natural places is good for mental and physical health. Other social movements are centrally concerned with the impact of climate change on health. This sub-theme will consider both types of movements and links between them. Examining the links between health and climate change social movements is vital because people may be more likely to support action for climate change if they understand the health issues global warming will give rise to.

This session will also provide opportunities to learn from the experience of earlier social movements that have led to healthy change. The advocacy for treatment rights for people living with HIV/AIDS is a powerful example of such a movement. The tactics and strategies they used holds lessons for social movements campaigning on climate change and health.

Social movements use many different strategies including political lobbying, public protests, social media activism, boycotts, shareholder activism, petitions, and direct action. Examples of each of these will be highlighted in this session. Most of the tactics are aimed at advocacy for change. The importance of advocacy to public health has been explained as:

Advocacy is necessary to steer public attention away from disease as a personal problem to health as a social issue, and the mass media are an invaluable tool in this process. Advocacy is a strategy for blending science and politics with a social justice value orientation to make the system work better, particularly for those with least resources' (Wallack et al., 1993, p. 5).

| OBJECTIVES

The session will:

- Examine the role of social movements in advocating for climate action
- What lessons can we bring in from other health social movements?
- Consider the way climate social movements use health arguments in their advocacy
- Examine the strategies used by social movement to determine their effectiveness

| MODERATOR

- **Fran Baum,** Professor, The University of Adelaide, and Past co-Chair and current member Advisory Council, People's Health Movement, Australia

| SPEAKER

- **Erika Arteaga-Cruz,** PHM ecosystem and health circle / Professor, People´s Health Movement/ Universidad San Francisco de Quito, Ecuador
- **Paul Laris,** PHM South East Asian and Pacific Co-ordinator and Extinction Rebellion Activist, PHM, Australia
- **Alexis Benos,** Professor of Social Medicine & Primary Health Care, Aristotle University of Thessaloniki, Greece
- **Bridget Lloyd,** Advisory Council, People's Health Movement, South Africa
- **Maria Kolesnikova,** acoactivist, UN Champion of the Earth, Chairwoman at MoveGreen NGO, Kyrgyzstan. Expert in advocacy and information campaigns on air quality and climate change. Founder of Air Quality Central , MoveGreen, Kyrgyzstan
- **Mbali Baduza,** Legal Researcher, SECTION27, South Africa
- **Madhuresh Kumar,** activist-researcher, Atlantic Institute, France

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PS 3.5

HOW DO WE REDUCE THE IMPACT OF HEALTHCARE ON THE ENVIRONMENT?

| BACKGROUND

Healthcare is one of the most polluting industries, responsible for nearly 5% of total global greenhouse gases1 and generating over a tonne of waste per hospital bed each year2. The COVID-19 pandemic has also greatly exacerbated the use of single-use plastics which have limited potential for recycling.

In this session we look at the opportunities for ‘greening health’ with a focus on real world examples driving change at global, national and local levels.

| OBJECTIVES

By attending this session you will -

- Understand the challenge of why we can’t achieve true health without healthy health systems
- Hear from a panel of international experts on strategies for implementing policy level change in your health systems and organisations
- See four real world examples of initiatives reducing the impact of healthcare on the environment which we hope will spread
- Learn key strategies on how to build local collaboratives to accelerate how we can make healthcare more green

| MODERATOR

- **Ashley McKimm,** Director of Partnership Development, British Medical Journal, United Kingdom

| KEYNOTE SPEAKER

- **Shweta Narayan,** TED speaker & international climate and health campaigner for Health Care Without Harm (HCWH), Healthcare Without Harm, India

| PANELIST

- **Renzo R. Guinto,** Director, Planetary and Global Health Program, St. Luke's Medical Center College of Medicine, Philippines
- **Nuttapun Supaka,** Director of Partnership and International Relations Section, ThaiHealth Promotion Foundation, Thailand
- **Ariel Pablos-Mendez,** Professor of Medicine, Columbia University Medical Center, United States of America

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PS 3.6

MULTI-SECTORAL POLICIES AND PRACTICES: ADAPTATION

| BACKGROUND

Adaptation action advances climate-resilient communities, ecosystems, and economies, with particular focus on vulnerable populations – the poor, women, and indigenous peoples. These groups are often the most vulnerable to climate change and are at greater health risk of its impacts. A single shock (e.g. a storm) or slow onset impact (such as sea level rise) can exacerbate existing vulnerabilities and increase the likelihood of locking communities already at risk into cycles of poverty. Support to countries to respond to the ongoing impacts of climate change and to prepare for likely impacts, including uncertainty, in the future, is imperative.

Climate change puts the healthcare system at risk by threatening infrastructure through extreme weather and in meeting the growing demand for treating climate-induced illness. The integration of climate risks and health into national planning and budgeting processes and strategies through Health National Adaptation Plans (H-NAPs), Vulnerability and Adaptation Assessments (V&A's), and National Adaptation Programmes of Action (NAPAs) is also a way of drawing attention to the issue. This enables countries to align their adaptation planning processes with their national development plans and other existing planning efforts while ensuring whole-of-society and multi-stakeholder engagement with key institutions, academia, civil society, NGOs, and the private sector.

| OBJECTIVES

The objective of this session is to share examples and ideas for multisectoral practices and policies to improve understanding of and action on climate change adaptation and health across regions and to discuss challenges and opportunities. We will focus on strategies and interventions to promote health and adapt healthcare systems for climate change conditions through policy reform, innovation and modeling, national adaptation plans, and early warning detection systems. Through support to countries on adaptation policy and programming, the intention is to leverage and catalyze financing – domestic public finance and private finance – to scale up adaptation action in the context of supporting health.

| CHAIRS

- **Douglas Webb,** Manager, Health and Innovative Financing, HIV, Health and Development Group, UNDP, United States of America
- **Sean Leung,** Deputy Executive Manager, Charities, The Hong Kong Jockey Club, China

| MODERATOR

- **Gabriel M Leung,** Executive Director, Charities and Community, The Hong Kong Jockey Club, China

| SPEAKER

- **Montira Pongsiri,** Senior Advisor, Climate and Health, Save the Children, United States of America
- **Giulia Loffreda,** Researcher, Institute for Global health and development, Queen Margaret University, United Kingdom
- **Rudolf Abugnaba-abanga,** Deputy chief Nutrition Officer/PhD Candidate, Presbyterian Church of Ghana Health Service/University for Development Studies, Ghana
- **Kristine Belesova,** Senior Lecturer in Global Population Health, Imperial College London, United Kingdom
- **Sally Edwards,** Program Officer at PAHO/WHO, WHO, United States of America
- **Manjit Kaur Sohal,** Regional Program Manager for Climate & Health, Health Care Without Harm, Philippines